

## XXIII.—On new Mammals obtained by the Utakwa Expedition to Dutch New Guinea. By OLDFIELD THOMAS.

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THE British Museum owes to the organisers of Dr. A. F. R. Wollaston's recent expedition, *via* the Utakwa River, to the snow mountains of the Charles Louis Range, Dutch New Guinea, the considerable series of mammals obtained during the expedition. Mr. C. B. Kloss, already so well known as a mammal collector in the Malay Peninsula and islands, was in charge of the collecting work and it was hoped that a really large series of different forms would have been obtained. But the difficulties in the way of collecting, especially the entire unsuitability of the natives to give any help, prevented any number of the interesting arboreal forms being obtained, amongst which novelties are most to be looked for. On the other hand, thanks to the industry of Mr. Kloss and his Dyak trappers, a very good series of terrestrial species was obtained, notably a particularly good set of the genus *Uromys*, which is represented by no less than six species, three of them being new. In all, the collection consists of about 150 specimens, which form a very valuable and acceptable addition to the British Museum's material from that still little-known island New Guinea.

*Hipposideros wollastoni*, sp. n.

Near *H. muscinus*, but with a doubled posterior nose-leaf and more inflated muzzle to the skull.

General external characters approximately as in *muscinus*, with the one important exception that the posterior nose-leaf has behind it a peculiar duplication developed to an extent unlike anything hitherto known in the genus. This duplication consists of a transverse crest growing out at the back of and parallel with the main crest, the groove between the main and supplementary crests being subdivided into three cells by two longitudinal connecting-bands. In *H. muscinus* there are merely some inconspicuous warts or convexities in the position of the complicated and definite structure now described. Its nearest analogue is found in the African *H. caffer*, where there is a less developed supplementary crest, but no trace of the longitudinal connecting-bands. Ears of the comparatively broad shape distinguishing *H. muscinus* from the allied Australian species *H. semoni* and *stenotis*.

Skull markedly smaller than that of *H. muscinus* in all dimensions, except that, owing to the proportionally smaller size of the brain-case, the area occupied by the inflated frontals is of equal extent. Frontal inflation much more developed, high, convex, rounded, so as to form behind it a deep concavity in the frontal profile. Supraorbital ridges behind the inflation much less sharply developed. Teeth smaller throughout. Small upper premolar well developed.

Dimensions of the type (measured on the spirit-specimen):—

Forearm 44 mm.

Head and body 45; tail 27; ear 15×13; third finger, metacarpus 31, first phalanx 13·5; lower leg and hind foot 21·7.

Skull: length to front of canines 17·3; zygomatic breadth 9·5; mastoid breadth 8·1; front of canine to back of  $m^3$  6·7.

*Hab.* Utaqua River, S.W. New Guinea.

*Type.* Adult female. B.M. no. 13.6.18.4. Collected January 1912.

This species, so like *H. muscinus* in other respects, is at once distinguished by the remarkable duplication of the posterior nose-leaf.

The following new *Hipposideros* may also be conveniently described here:—

*Hipposideros stenotis*, sp. n.

Allied to *H. semoni*, Matsch., but smaller, and with conspicuously smaller skull and teeth.

External characters very much as in *H. semoni*, the mesial wart on the sella similarly elongate and the ears equally, or perhaps even more, remarkably narrowed and pointed. Posterior nose-leaf with its convexity behind not developed into a supplementary leaf. Tail with its two terminal vertebræ absent or aborted in the type, but this may be accidental or pathological.

Skull much smaller in all dimensions than in *semoni*, the frontal prominences less developed. Teeth even more reduced in proportion than the skull, the molars only about half the bulk of those of *semoni*. Small upper premolar absent in the type, as it is in the type of *semoni*, but this is evidently an inconstant character, as the tooth is present in the two Museum specimens of *semoni*.

Dimensions of the type (measured on the spirit-specimen):—

Forearm 43·5 mm.

Head and body 45; ear 18 × 10; third finger, metacarpal 32, first phalanx 16; lower leg and foot 28·5.

Skull: length to front of canines 17; zygomatic breadth 9·1; mastoid breadth 7·8; front of canine to back of  $m^3$  5·8.

*Hab.* Northern Territory of S. Australia. Type from Mary River.

*Type.* Adult female. B.M. no. 97.4.12.7. Collected by Dr. Knut Dahl. Received in exchange from the Christiania Museum.

*Stenomys klossii*, sp. n.

A mountain-rat allied to *S. niobe*.

Externally quite similar to *S. niobe*, the colour and length of fur quite as in that species. Feet in some specimens with whitish digits, in others wholly brown.

Skull longer than in *niobe*, with more inflated brain-case and longer narrower muzzle. Interorbital region broader than in *niobe*, its edges with rudimentary ridges, not quite smooth. Anteorbital plate very narrow, decidedly narrower than in the smaller skull of *niobe*, its front edge strongly slanted. Palatal foramina rather longer, their hinder end not so distant from the molars.

Dimensions of the type (measured in flesh):—

Head and body 123 mm.; tail 130; hind foot 27; ear 18.

Skull: greatest length 34·3; condylo-incisive length 31; zygomatic breadth 15·8; nasals 12·6; interorbital breadth 6; breadth of brain-case 14·6; palatilar length 15; palatal foramina 5·2; upper molar series 5·6.

*Hab.* Upper Utkwa River, southern slope of Charles Louis Mountains, Dutch New Guinea. Type from "Camp 9," alt. 5500'. Other specimens from "Camp 11," 8000'. Seven specimens.

*Type.* Adult male. B.M. no. 13.6.18.83. Original number 91. Collected 1st February, 1913, by C. B. Kloss.

I have named this interesting mountain-rat in honour of Mr. C. B. Kloss, who had charge of the mammal-collecting during the Utkwa Expedition. The species was the only mammal obtained at the higher collecting-stations.

UROMYS.

Of the large rats of the *Uromys macropus* group the Utkwa Expedition obtained examples of two species, from low country and 2500' respectively.

These appear to be both unnamed, and may be described as follows :—

*Uromys nero*, sp. n.

Size very large, though less than in the giant *U. anak* and *rothschildi*. Fur harsh and thick, the under surface more completely hairy than in the next species. General colour above very dark, coarsely grizzled bistre, the median dorsal area blackish, markedly darker than the sides. Sides of cheeks and shoulders grey. Under surface pure white, sharply defined laterally; inner sides of limbs prominently white. Hands and feet pale brown above. Tail practically quite naked, a few isolated hairs, less than a scale in length, perceptible with the help of a lens; its terminal third to one-half prominently yellow all round, while the base also is more or less yellow below, the usual black being thus restricted to the upper side of the basal portion.

Skull very large and powerfully built, larger and heavier in proportion to the size of the animal and the length of the feet than in any other species; its shape normal, the forehead not specially convex. Interorbital region smooth, faintly concave, its edges sharp, but without distinct beading. Posterior narial opening much broader than in the next species.

Dimensions of the type (measured in the flesh):—

Head and body 279 mm.; tail 232; hind foot 56; ear 30.

Skull: greatest length 68·3; condylo-incisive length 63·7; zygomatic breadth 36·5; nasals  $25 \times 8\cdot5$ ; interorbital breadth 11; breadth of brain-case 25·5; palatilar length 36; palatal foramina 8·2; width of mesopterygoid fossa 6·5; upper molar series (crowns) 12·2.

*Hab.* Utakwa River, at middle altitudes, type from "Camp 3." 2500'.

*Type.* Old female with worn teeth. B.M. no. 13. 6. 18. 13. Original number 67. Collected 15th December, 1912, by C. B. Kloss. Two adult and three young specimens examined.

This fine species differs from all hitherto-described forms allied to it by its dark coloration, the result of the saturate conditions in which it lives. While smaller in all respects than the giant black-tailed species *U. anak* and *rothschildi*, it is larger, so far as regards skull, than any of the other yellow-tailed forms.

From its lowland neighbour *U. scaphax* it differs by its

larger size, more yellow tail, whiter underside, and normal-shaped skull with unbowed forehead and broad posterior nares.

*Uromys scaphax*, sp. n.

Related to *U. aruensis*, Gray, but coloration not rufous.

Size large, though less than in *U. nero*. Fur harsh, under surface thinly haired. General colour above dark grizzled greyish, with a slight fulvous tinge; dorsal area slightly darker than rest, but not distinctly blackish as in *U. nero*. Under surface and inner sides of limbs white, but owing to the sparseness of the fur the skin shows through to a great extent, the practically naked condition of the inner sides of the limbs being especially noticeable. Hands and feet pale brown. Tail more completely black than in most species of this section, the yellow confined to the tip and in one case reduced there to a mere spot half an inch long.

Skull strikingly like that of *U. aruensis*, of similar size and with the same high, bowed, and convex forehead and broad interorbital space. Opening of posterior nares markedly narrower than in *U. nero*.

Dimensions of the type (measured in the flesh):—

Head and body 277 mm.; tail 235; hind foot 52; ear 26.

Skull: greatest length 62.5; condylo-incisive length 57.4; zygomatic breadth 32.2; nasals 21.5 × 6.4; interorbital breadth 11.8; breadth of brain-case 22; palatilar length 31.2; palatal foramina 6.6; width of mesopterygoid fossa 5; upper molar series (crowns) 10.5.

*Hab.* Utakwa area at low levels. Type from Canoe Camp, Lower Setakwa River, alt. 150'. Other specimens from Launch Camp, 20'. Also received from the Mimika River; collected by G. C. Shortridge.

*Type.* Adult female. B.M. no. 13.6.18.8. Original number 206. Collected 25th October, 1912, by C. B. Kloss. Four specimens.

This species is evidently nearly allied to the Aru Island species, *U. aruensis*, the skulls of the two forms being practically identical; but it has the more normal colouring of the Papuan species (being intermediate in this respect between *U. nero* and *U. validus*), instead of the rich rufous of the island-rat.

With regard to Dr. Jentink's "*Pogonomys multiplicatus*," from the Sentani Lake, on the northern side of New Guinea,

which may possibly be one or other of the species now described, I regret that no exact determination of it seems to be possible. It was based on a young specimen with the third molar barely erupted, so that, even with topotypes, it will probably always be difficult to be certain of its identification, since several species may occur in near neighbourhood to one another. All the species of this group have the multiplicate character of the palate, which seems to have been the chief reason for Dr. Jentink's venturing to describe so young a specimen.

Of the smaller forms of *Uromys* the Expedition obtained 55 specimens, apparently referable to four different species, as follows:—

1. Size rather small. Tail wholly black. Belly-hairs white to their bases ..... *U. stakeri calidior*, Thos.

At Launch and Canoe Camps, Setakwa River. Sea-level to 150 ft.

2. Size larger. Tail conspicuously bicolor. Belly-hairs mouse-grey at base ..... *U. lorentzi*, Jent.

At same camps as No. 1.

Closely related to *U. levipes*, Thos.

3. Size smaller. Tail partially and indistinctly bicolor, with dull yellowish markings on its under side. Belly hairs slaty basally.

*U. platyops*, Thos.

At Camp No. 3 above the Utakwa River. Alt. 2500'.

4. Size fairly large. Tail as in No. 3. Fur long, soft, and woolly. Under surface dull buffy, with long slaty-grey bases.

*U. mollis*, sp. n.

At Camps Nos. 6 c and 9, Upper Utakwa River. Both at altitude 5500 ft.

In addition, there should apparently occur a species like No. 1, but larger, which was described from the Noord River as *Pogonomys leucogaster* by Jentink. This is evidently closely allied to Peters's *U. bruijnii* from Salawatti.

#### *Uromys mollis*, sp. n.

Size rather less than in *U. lorentzi*. General characters very much as in No. 3 above, but the fur longer, softer, and woollier, the colour all over duller and more "saturate," that of the belly less sharply defined laterally, more suffused with buffy, and with the slaty bases much longer. Feet dull buffy.

Skull with a more rounded convex brain-case than in other species. Interorbital region broad, little ridged.

Dimensions of the type (measured in flesh):—

Head and body 161 mm.; tail 140; hind foot 34; ear 21.

Skull : greatest length 39.5 ; condylo-incisive length 36.2 ; zygomatic breadth 18.5 ; nasals 13.8 ; interorbital breadth 7.1 ; breadth of brain-case 15.7 ; palatilar length 18.5 ; palatal foramina 5.9 ; upper molar series 8.

*Hab.* Southern slope of Mt. Carstenz, Charles Louis Mts., Dutch New Guinea, on Upper Utakwa River. *Type* from "Camp Padang, 6 c." Altitude 5500'. Four specimens.

*Type.* Adult male. B.M. no. 13. 6. 18. 35. Original number 231. Collected 17th February, 1913, by C. B. Kloss.

This is a soft-furred highland form, apparently most related to No. 3 of the lower country, though the different shape of the skull shows that it is not a mere local representative of that species.

*Phascogale murex aspera*, subsp. n.

Nearly allied to the true *Ph. murex*, Thos., but with shorter skull and heavier teeth.

External appearance almost exactly as in *murex*, except that the limbs are of the same brown colour as the body, instead of being a little greyer, and the light ends to the hairs of the underside are more or less buffy instead of being white ; the light colour of the underside is also more diffused and less sharply defined from the brown colour of the flanks. Fur of exactly the same crisp character as in *Ph. murex*.

Skull comparatively low, with shorter broader muzzle and broader interorbital region than in the typical form. As indicating the shortness of the muzzle it may be noted that the space occupied by the premolariform teeth (6.2 mm.) is shorter than in *murex* (7.6 mm.), while that occupied by the molariform teeth (10.3 mm. as against 9.0 mm.) is longer. Molariform teeth much larger and heavier throughout. Premolars evenly increasing in size backwards.

Dimensions of the type (measured in flesh) :—

Head and body 169 mm. ; tail 180 ; hind foot 33 ; ear 21.

Skull : condylo-basal length 43 ; zygomatic breadth 22.7 ; nasals 16 × 5.3 ; intertemporal breadth 8.7 ; mastoid breadth 16.6 ; palatal length 24.4 ; breadth between outer corners of  $m^3$  14.2 ; combined length of three anterior molariform teeth 8.9.

*Hab.* Utakwa River ("Camp No. 3"). Alt. 2500'.

*Type.* Adult female. B.M. no. 13. 6. 18. 90. Original number 40. Collected 1st December, 1912, by C. B. Kloss.

This *Phascogale* is practically identical externally with the

true *Pl. murex* of German New Guinea, but is distinguished by its shorter muzzle and larger teeth.

The Expedition also obtained a second example of *Phascogale melanura modesta*, Thos., previously only known from the type.

#### XXIV.—Some new Species of *Uromys*.

By OLDFIELD THOMAS.

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BESIDES the two species of *Uromys* above described from the Utakwa River, Dutch New Guinea, there appears to be evidence of at least four species belonging to the group of the large Papuan *Uromys* which have the terminal half of the tail yellow.

The first of these is *U. barbatus* (*Mus barbatus*, M.-Edw.), from the Aroa basin, S.E. New Guinea, of which the typical skull has been kindly lent me by Prof. Trouessart. In this the skull is narrow, with but little-expanded zygomata, low in the facial portion, with a strongly marked parietal convexity, from which the profile runs forwards in a straight line to the tip of the nasals. The palatal foramina are unusually wide apart and divergent behind, instead of being narrow and parallel. The pterygoid plates seem to be little developed and to begin further backwards, but the skull is in a somewhat unsatisfactory condition, and it is impossible to be sure of its natural characters. The hind foot of the type is 59 mm. in length.

Secondly, there is *U. validus*, Peters and Doria, to which I refer two specimens from Owgarra, Angabunga R. (*Meek*), and one from Madeu (*Stalker*), British New Guinea. The type was from Katau (*d'Albertis*).

In this species the skull is of normal shape, the upper profile evenly and slightly convex throughout, with but little parietal convexity or frontal flattening. The supraorbital edges are sharply square, with a slight concavity between them. Zygomata well expanded. Palatal foramina narrow, parallel. Mesopterygoid fossa rather narrow. Hind foot 52-56 mm.

A third described species is Ramsay's "*Hapalotis papuanus*," but the type having disappeared, several of the skull- and tooth-measurements being inconsistent with each other,